

Title (en)
COMBINED ENERGY NETWORK

Title (de)
KOMBINIERTES ENERGIENETZWERK

Title (fr)
RÉSEAU D'ÉNERGIE COMBINÉ

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Application
EP 22190419 A 20141121

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• EP 13193803 A 20131121
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• EP 2014075330 W 20141121

Abstract (en)
[origin: CA2931266A1] The invention relates to an energy supply system (2) having a first energy supply network (4) in the form of a power network (36) for transporting electrical energy (46), and a second energy supply network (6) having a transport system (60) for fluid operating materials (56), said energy supply system comprising at least one energy-generating unit (8), by way of which by means of electrical energy and carbon-containing material (50, 54, 58) the fluid operating materials can be produced and can be fed into the second energy supply network, and further comprising at least one local energy management unit (10), by means of which fluid operating materials extracted from the second energy supply network can be converted into electrical energy (74, 76, 78) and can be fed into a local power network (90). The second energy supply network (6) has a transport system (62) for the return transport of carbon dioxide-containing residual gases (58), which are incurred during the energy recycling of the fluid operating materials (56) by one or more energy consumers (11) and/or energy management units (10).

Abstract (de)
Eine Energiemanagementeinheit (10) zur Versorgung eines lokalen Energieversorgungsnetzwerks (29) umfasst Vorrichtungen zur Entnahme von elektrischem Strom (46) aus einem übergeordneten Stromnetz (4, 36), zu dessen Umwandlung in elektrischen Strom (47) niedrigerer Spannung, und zur Einspeisung dieses elektrischen Stroms in ein lokales Stromnetz (90). Die Energiemanagementeinheit weist weiter Vorrichtungen auf zur Entnahme von fluiden Betriebsstoffen (56) aus einem Transportsystem (6, 60) für fluide Betriebsstoffe, zur Erzeugung von elektrischem Strom (47) aus den genannten fluiden Betriebsstoffen (56), und zur Einspeisung des genannten elektrischen Stroms in das lokale Stromnetz. Eine Steuerungsanlage (70) ist dazu eingerichtet, über ein Kommunikationsnetzwerk (16) mit einer Steuerungseinheit (9) des Energieversorgungssystems (2) zu kommunizieren und die Bezugsraten von elektrischem Strom (46) aus dem übergeordneten Stromnetz (4, 36) und von fluiden Betriebsstoffen (56) aus dem Betriebsstoff-Transportsystem (6, 60) so zu steuern, dass eine zeitlich möglichst gleichmäßige Belastung der entsprechenden Versorgungsnetze (36, 60) und/oder eine möglichst kleine Dimensionierung des zweiten Energieversorgungsnetzwerks (6, 60) in Bezug auf den Leitungsquerschnitt und/oder den Betriebsdruck erzielt wird.

IPC 8 full level
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